

1 large number of human beings.

2 At the present time there is such evidence collected
3 from human experience with respect to two constituents. For
4 example, evidence is overwhelming that nicotine in cigarette
5 smoke is harmful to some individuals at least. It is probable
6 that reduction in the nicotine content of smoke would produce
7 a less harmful smoke for these persons.

8 In a similar way, it seems probable that the carcinogenic
9 hazard of smoke depends upon the total amount of tar,
10 and that reduction of the tar delivered by cigarettes would
11 lead to a reduced hazard. Therefore total tar and nicotine
12 content might be advertised under the conclusion that these
13 two characteristics are clearly associated with the health
14 hazard of smoking.

15 Evidence obtained from laboratory studies is important
16 to be sure. However, for the purposes of Rule 2, it seems
17 imperative that such laboratory data be supported by observations
18 of the human population risk. I say this, Mr. Chairman, and
19 Commissioners, because of the fact I am a laboratory scientist.
20 I have no experience directly with human hazards in this aspect.
21 My experience is entirely in the laboratory, and I feel
22 I am a good judge of the limitations of that type of evidence.

23 For Rule 3, the nicotine and tar content of cigarette
24 smoke should be required on every carton and every pack in
25 which cigarettes are sold to the public. It is clear that both

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1 boundary or deterrent to combustion beyond the holes.
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3 I would like to summarize by saying that I believe
4 that adoption of these rules would do a lot to stimulate the
5 industry to improve or to reduce the hazardous nature of the
6 product. Thank you.

7 COMMISSIONER ELMAN: I want to ask you, Doctor, whether
8 there is a safe level so far as ingredients in smoke, like tar
9 and nicotine, are concerned below which there is no danger to
10 health. You said that the total elimination of tar and nicotine
11 would be a significant reduction in health hazards. But suppose
12 it isn't feasible to eliminate them entirely, but merely to
13 reduce them.

14 Now, how much do you have to reduce the tar and
15 nicotine that is ingested in order to achieve this? In other
16 words, otherwise what is the health significance in the reduc-
17 tion of tar and nicotine?

18 DR. ECK: I can't give you a definitive answer re-
19 garding the nicotine, but in terms of tar on the basis of both
20 evidence from human behavior and from our own laboratory evidence,
21 I have no belief that there is any safe level of tar.

22 However, I have a strong conviction that any sub-
23 stantial reduction in the tar delivered to the smoker would
24 result in a substantial reduction of his risk. If any of my
25 children were to smoke, I would certainly hope they would smoke
26 cigarettes which yielded a small amount of tar, and while they

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